

CLAIMS

1. A composition comprising an E6 or E7 protein or E6/E7 fusion protein from HPV
optionally linked to an immunological fusion partner, and an immunomodulatory
5 CpG oligonucleotide.
2. A composition as claimed in claim 1 wherein the fusion partner is selected from
the group; protein D or a fragment thereof from Heamophilus influenzae B,
lipoprotein D or fragment thereof from Heamophilus influenzae B, NS1 or
fragment thereof from Influenzae Virus, and LYTA or fragment thereof from
10 Streptococcus Pneumoniae.
3. A composition as claimed in claim 1 or 2 wherein the E6 or E7 proteins are
derived from HPV16 or HPV18.
4. A composition as claimed in claim 1, 2 or 3 wherein the E7 protein is mutated.
- ~~5. A composition as claimed in claim 1, 2 or 3 wherein the E6 protein is mutated.~~
- 15 6. A composition as claimed in any of claims 1 to 5 additionally comprising a
histidine tag of at least 4 histidine residues.
7. A composition as claimed herein comprising an additional HPV antigen.
8. A composition as claimed herein where the immunomodulatory CpG oligonucleotide
comprises a hexamer motif: purine purine cytosine guanine pyrimidine pyrimidine.
- 20 9. A composition as claimed herein wherein the immunomodulatory CpG
oligonucleotide has two or more CpG motifs.
10. A composition as claimed herein wherein the CpG oligonucleotide contains a
phosphorothioate inter-nucleotide linkage.
11. A composition as claimed herein wherein the CpG oligonucleotide is selected
25 from the group:

OLIGO 1: TCC ATG ACG TTC CTG ACG TT

~~OLIGO 2: TCT CCC AGC GTG CGC CAT~~

~~OLIGO 3: ACC GAT GAC GTC GCC GGT GAC GGC ACC ACG~~

~~12. A composition as claimed herein for use in medicine.~~

Sub A3 5 ~~13. A method of inducing an immune response in a patient to an HPV antigen comprising administering a safe and effective amount of a composition as claimed herein.~~

~~14. A method of preventing or treating HPV induced tumours in a patient comprising administering a safe and effective amount of a composition as claimed herein.~~

10 ~~15. A method of preparing a composition as claimed herein, comprising admixing an E6, E7 or E6/E7 fusion protein optionally linked to an immunological fusion partner, and an immunomodulatory CpG oligonucleotide.~~